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10/549,463	06/27/2006	Zhendong Mike Zhou	061300-0843	8357
26371	7590	04/15/2008		
FOLEY & LARDNER LLP			EXAMINER	
777 EAST WISCONSIN AVENUE			MITCHELL, JOHN-PAUL N	
MILWAUKEE, WI 53202-5306				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/549,463

**Applicant(s)**

ZHOU ET AL.

**Examiner**

John-Paul N. Mitchell

**Art Unit**

4136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 06/27/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SI/100)  
Paper No(s)/Mail Date 09/15/2005 and 11/17/2005  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 5-7 and 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

1. Claim 5 recites the limitation "a second actuator" in lines 1 and 2 of the claim.

There is insufficient antecedent basis for this limitation in the claim.

2. Claim 6 recites the limitation "a third actuator" in lines 1 and two of the claim.

There is insufficient antecedent basis for this limitation in the claim.

3. Claim 13 recites the limitation "a second actuator" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 14 recites the limitation "a third actuator" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 7 and 15 are rejected on the basis that they are dependant upon claims (7 on 4 or 5, and 15 on 13 or 14) rejected above, and thus are rejected themselves.

3. **Claims 8 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** Claims 8 and 16 are indefinite because the Examiner cannot determine whether the control apparatus is only one device either mounted onto the support structure or is a stand-alone remote device, or whether

Art Unit: 4136

the control apparatus includes both one on the support structure and one remote apparatus. Examiner construes this to mean a single control apparatus mounted somewhere on the same structure as the claimed invention, but not directly on the handling apparatus.

4. **Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.** The submitted drawings fail to depict a structure that resembles a truck and a trailer. The apparatus/vehicle submitted, in the opinion of the Examiner, appears to be only a truck.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 1-8, 10-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Backer et al. (US Patent 5,249,643) in view of Raisio (US Patent 5,102,284).** Backer et al. discloses a material handling apparatus (item 20) coupled to a support structure (6), coupled with a telescopic riser portion (30), telescopic boom portion (40), jib portion (50), and a hook (60), along with a control apparatus (10), wherein each telescopic portion can be independently and selectively moved. Claim 10 further recites said apparatus on a vehicle (5) comprising said support structure (6) along

Art Unit: 4136

with a weight bearing element (7 or 8). Backer et al. teaches a material handling apparatus with a telescopic riser (Fig. 1, item 5), a telescopic boom (7), a jib (connecting items 8 and 33), and control apparatus (Fig. 8), all of which can be independently and selectively controlled, all of which is also mounted onto a vehicular support structure (Fig. 1, item 4) with wheels (Fig. 1) as weight bearing elements. Backer et al. does not disclose a jib coupled to the boom via an actuator with a hook. Raisio teaches a jib (Fig. 1, item 6), coupled to a boom (4) via an actuator (9), with a hook (18) mounted on the end. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to provide a telescoping jib with a hook mounted on the end to the apparatus in Baker et al. in view of the teaching to Raisio. The motivation for doing so would have been to allow for greater reach and maneuverability of the apparatus.

8. Backer et al., in view of Raisio, further discloses claims 2 and 11, reciting a rotation assembly (70) coupled to the support structure and riser portion. Backer et al. in specific teaches a riser portion coupled to the support structure as set forth above, coupled to a rotation assembly (Fig. 2, item 2). The combination of Raisio and Baker et al., then, shows that it would have been obvious at the time of invention to a person having ordinary skill in the art to couple a rotation assembly to a support structure, and thus the claim contains no unexpected result. Baker et al. contains no limitation on the turn radius of the rotation assembly, therefore qualifying rotation to be at least 360 degrees.

9. Regarding Claim 3, Baker et al. discloses the support structure and apparatus as set forth above mounted onto a vehicle.

Art Unit: 4136

10. Regarding Claims 4, 5, and 6, as well as 12, 13, and 14, Backer et al. discloses first (19), second (29), and third (33) actuators coupled between the riser portion and support structure, the boom portion and the riser portion, and the jib portion and riser portion, paired respectively.

11. In regards to Claims 7 and 15, Backer et al. discloses that the actuators set forth in claims 4, 5, or 6 be selected from a group including hydraulic machine, pneumatic machine, and electric motor. Baker et al. teaches the use of hydraulic actuators (Fig. 8 and claim 4), a type contained in the group recited in inventor's claims 7 and 15.

12. Regarding Claims 8 and 16, Baker et al. does not teach a specific location for mounting the control apparatus, but to one having ordinary skill in the art at the time of the invention, it would be safe to assume that the control device is inherently mounted somewhere on the apparatus in an operable location. Further, in this instance the mounting location of the control apparatus would be a design feature and a matter of manufacturing preference, and thus is not a patentable feature. Claims 8 and 16 are rejected as being obvious to a person having ordinary skill in the art with respect to Baker et al. in view of Raisio.

13. In regards to claim 18, which recites "wherein the support structure is configured as one of a truck and a trailer," Baker et al. in view of Raisio sets forth the material handling apparatus above as one mounted upon a vehicle. The inventor's specification fails to explicitly define the terms "truck" and "trailer", thus using the broadest reasonable interpretation of the claims, the vehicle as disclosed by Baker et al. in view of Raisio could be construed as a truck or trailer or both. Claim 18 is rejected as being obvious at

Art Unit: 4136

the time of the invention to a person having ordinary skill in the art to configure the support structure as one of a truck and a trailer.

14. Regarding Claim 19, Backer et al. discloses wheels as weight bearing elements (Fig. 3, item 4).

15. **Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (US Patent 5,249,643) in view of Raisio (US Patent 5,102,284) in further view of Nist et al. (US Patent 4,941,546).** Claims 9 and 17 recite an “outrigger assembly coupled to the support structure.” The combination of Backer et al. and Raisio discloses the apparatus as set forth above, but does not disclose an outrigger assembly. Nist et al. discloses an outrigger assembly on a support structure or vehicle that will be under additional load to add additional support and stability to the overall structure (Nist et al., Fig. 3, items 21, 32, 39, and 120). Therefore it would have been obvious to a person having ordinary skill in the art to couple an outrigger assembly to the support structure in order to increase stability of the assembly in light of Baker et al. as taught by Nist et al, in order to provide additional support and stability to the vehicle.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John-Paul N. Mitchell whose telephone number is 571.270.5226. The examiner can normally be reached on 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Shriver can be reached on 571.272.6698. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4136

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J-PNM

**/J. Allen Shriver/  
Supervisory Patent Examiner, Art Unit 4136**